ABSTRACT OF THE DISCLOSURE

A method of fetal gene therapy is disclosed. In general, the method comprises the steps of identifying a fetus with a genetic defect, obtaining allantois/umbilical cord cells expressing a gene product that ameliorates the genetic defect, and exposing the fetus to the allantois/umbilical cord cells wherein a chimeric allantois is capable of supplying the gene product to the fetus is created. The present invention is also a method of examining the effect of test compounds on vasculogenesis and angiogenesis by observing the effect of the test compound on cultured allantoic explants.